

L3 (4.3) Unit Rates

A rate is a comparison of two quantities with different units.

ex: 7 lemons for \$2
112 points in 82 games
500 km driven in 6 hours

A unit rate is a rate with one quantity associated with a single unit of the other quantity.

ex: 3.5 lemons for \$1.....or we can write 3.5 lemons / \$ ←

1.37 points per game.....or we can write 1.37 points / game ←

83.3 km per hour.....or we can write 83.3 km / h ←

Ex.1: Determine each unit rate.

a) 770 km travelled in 7 hours

$$= \frac{770 \text{ km}}{7 \text{ hours}}$$

$$= 110 \text{ km/h}$$

b) 9 kg lost in 6 weeks

$$\frac{9 \text{ kg}}{6 \text{ weeks}}$$

$$1.5 \text{ kg/week}$$

Ex.2: A 24-pack of coke costs \$5.99.

The same pop costs \$1 per can from the vending machine.

Is this a fair price? Explain.

$$= \frac{5.99}{24}$$

$$= \$0.25 / \text{can}$$

∴ it is not fair

Assigned Work:
p123-124 #1ab, 2ab, 3, 4, 5, 7, 8



You will investigate two methods in which firewood is split.

- > Northern Lights Firewood uses a machine called a firewood processor.
- > Duhaime's Timber Products uses 6 people with chain saws and log splitters.

It produces 32 cords in 8 h.

They produce 21 cords in 6 h.

Which company produces firewood faster?

$$\text{Northern } \frac{32}{8} = 4 \quad \text{Duhaime's } \frac{21}{6} = 3.5$$

4 cords/hour

3.5 cords/hour

∞ Northern produces
Wood faster.